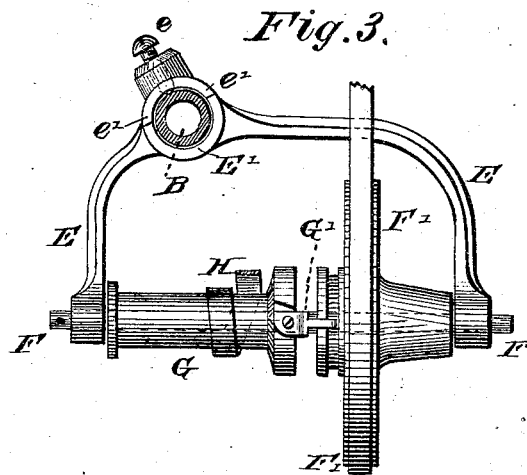
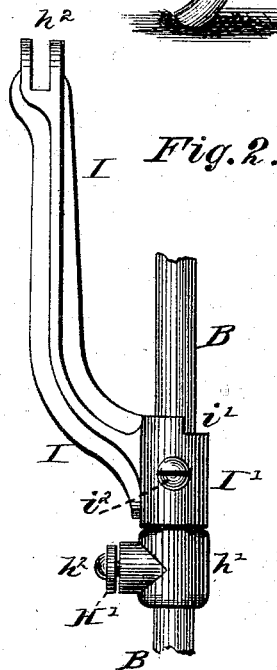
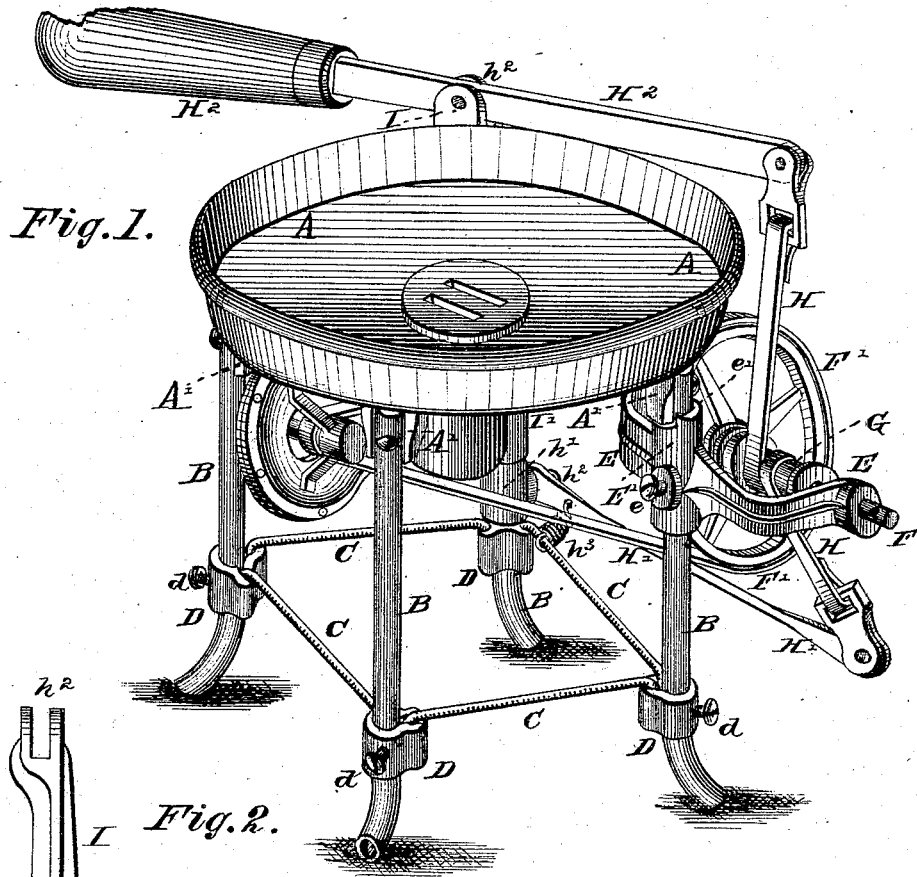


J. P. HOLT.
Portable-Forge.

No. 219,640.

Patented Sept. 16, 1879.



Witnesses:
A. M. Bright
A. O. McCreary

Inventor
John P. Holt.
per Leqqett & Leqqett, Attorneys.

UNITED STATES PATENT OFFICE

JOHN P. HOLT, OF CLEVELAND, OHIO.

IMPROVEMENT IN PORTABLE FORGES.

Specification forming part of Letters Patent No. **219,640**, dated September 16, 1879; application filed May 29, 1879.

To all whom it may concern:

Be it known that I, JOHN P. HOLT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Portable Forges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to portable forges; and consists in improvements whereby the device may be readily knocked down or taken apart for shipment, and whereby the device may be adjusted in its various parts.

In the drawings, Figure 1 presents a view, in perspective, of a portable forge embodying my improvements. Fig. 2 presents a separate view of the device, whereby the handle-bracket is attached rigidly to the frame and prevented from turning; Fig. 3, a separate view of the bracket which supports the mechanism for driving the fan.

A is the top plate of a portable forge. A' are lugs cast thereon or formed therewith, which project from the plate A, and are provided with recesses, into the sides of which the upper ends of the legs B rest, and are secured by screws or bolts.

The legs B, I prefer to make of pipe, though they may be made of solid rods. This form, however, is preferable, as being lighter, yet sufficiently strong.

C represent the leg-braces. Their ends are hooked into sleeves D, which sleeves are slipped upon the legs, and secured in any desired position by set-screws *d*. Of course, instead of the braces C being simply hooked into the orifices in the sleeves D, as shown, they may be fastened to the sleeves D in any other suitable manner.

E is a bracket, which supports the mechanism for driving the fan. This bracket E has a sleeve, E', adapted to slip over the upper end of the leg, and the set-screw *e* serves to fasten it on the leg. At the upper end of the sleeve E' there is a recess, *e'*, so that when the sleeve E' is in position the projection A' from the top plate will extend into the recess *e'*, thus preventing the sleeve E' from turning around the leg. The bracket E supports the shaft F, upon which runs the band-wheel F', that drives the fan. There is also upon the

shaft F a drum, G, bearing a clutch, G', which engages automatically with the rim on the hub of the band-wheel F', when the drum is turned in one direction, but which clutch slides freely over the rim when moving in the other direction. This drum is actuated alternately in opposite directions by means of the strap H, tension-arm H', and lever H², so that by actuating the lever H² the "fiddle-drill" motion given to the drum G causes the band-wheel to be turned and the fan operated.

The lever H² is secured at *h*² to the bracket I, which bracket has a sleeve, I', a recess, *i'*, and set-screw *i*², whereby the sleeve is fastened rigidly to the leg B and prevented from turning thereon. The tension arm H' is secured to the leg B by a sleeve, *h*¹, and set-screw *h*², and operates against the tension of a spring, *h*³.

The tension-arm may be given a greater tension by increasing the strength of the spring *h*³, or with the same spring by securing the sleeve *h*¹ at a higher point on the leg B.

The shaft F may be made in any form; but I prefer to make it hollow, with a projecting end and an oil-hole, through which oil may be fed to the interior and brought against the outer or journal surface through perforations within the drum. A plug may be inserted at the end to prevent oil from wasting, and when removed will furnish an orifice through which a wire or swab may be inserted to cleanse the interior.

What I claim is—

1. In a portable forge, the combination, with the top plate, A, legs B, and lug A', of the bracket E, provided with a sleeve having a recess, *e'*, into which fits the lower end of lug A' and set-screw, substantially as and for the purpose set forth.

2. In a portable forge, the combination, with the top plate, A, and legs B, of bracket E, shaft F, drum G, band-wheel F', strap H, clutch G', tension-arm H', spring *h*³, sleeve *h*¹, and set-screw *h*², substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN P. HOLT.

Witnesses:

JNO. CROWELL, Jr.,
WILLARD FRACKER.